September 2, 2008

WTC Technical Information Repository
Attention: Mr. Stephen Cauffman
National Institute of Standards and Technology
Stop 8610
Gaithersburg, MD 20899-8610

Dear Mr. Cauffman,

Thank you for the opportunity to comment on the draft NIST report compiled to address the unfortunate collapse of WTC Building 7 on September 11, 2001. I was intrigued by the report and I have provided some comments below to hopefully help improve the quality of the NIST report so that the general public can better understand the analysis of the situation.

Please let me know if you need any clarification of my comments. Per the instructions provided by NIST I have included my name and e-mail address below.

Comments should contain the following information:

Name: Jim Braun
Affiliation: citizen
Contact: e-mail: jbraun9@yahoo.com
Report Number: NCSTAR 1A
Page Number: All
Paragraph/Sentence: All

1. Comment: I searched through the document and I was not able to find where the report stated specifically how hot the open air fire was from the office material burning inside the building.

Reason for Comment: It is critical for the public to understand how hot an open air fire can get.

Suggestion for Revision: Please state specifically in the report how hot (in either degrees Celsius or degrees Fahrenheit) the open air fire was inside Building 7.

2. Comment: I was not able to find where the report stated specifically the temperature at which thermal expansion of fire-protected steel occurs.

Reason for Comment: It is important for the public to understand the temperature at which thermal expansion of fire-protected steel occurs.

Suggestion for Revision: Please state specifically in the report the temperature (in either degrees Celsius or degrees Fahrenheit) at which thermal expansion of fire-protected steel occurs.

3. Comment: I was not able to find where the report stated specifically the temperature at which thermal expansion of steel occurs.

Reason for Comment: It is important for the public to understand the temperature at which thermal expansion of steel occurs.

Suggestion for Revision: Please state specifically in the report the temperature (in either degrees Celsius or degrees Fahrenheit) at which thermal expansion of steel occurs.

4. Comment: I was not able to find in the report how far the steel column 79 expanded as a result of the thermal expansion due to open air fire - was it one inch or was it two feet?

Reason for Comment: It's important for the public to understand how far steel can expand as a result of open air fire.

Suggestion for Revision: Please state specifically in the report how far the steel expanded (e.g., one inch or two feet) as a result of thermal expansion caused by open air fire.

5. Comment: I was not able to find in the report specifically how column 79 buckled. If the attached floors broke free, there would have been less load on column 79 so the column should not have buckled.

Reason for Comment: It is important for the public to understand specifically how column 79 buckled.

Suggestion for Revision: Please state in the report specifically how column 79 buckled with less load on the column after the floors broke away.

6. Comment: I was not able to find in the report how NIST managed to jump from column 79 buckling to complete progressive global collapse of the entire structure. This is a huge gap in the NIST analysis since steel frame buildings are designed specifically to prevent global collapse. If a column fails in a steel frame structure then the rest of the structure is designed to pick up the load and keep the building standing. If NIST's assessment of column 79 buckling is correct then the only thing that should have occurred is a hole in the building where column 79 was standing - the rest of the structure should have remained standing.

Reason for Comment: It is important for the public to understand how an incredibly strong steel frame building can succumb to global collapse due to the failure of a single column when steel frame buildings are designed specifically to prevent global collapse.

Suggestion for Revision: Please state specifically in the report the exact reason why the other columns failed as a result of column 79 buckling.

7. Comment: I was not able to find in the report a clear explanation of how WTC Building 7 collapsed at free-fall speed in approximately six seconds. This implies that the top of the building collapsed through the incredibly strong lower structure without any resistance. How is this possible?

Reason for Comment: It is important for the public to understand how an incredibly strong steel frame building can collapse at free fall speed without incurring any resistance from the strong steel beams and columns.

Suggestion for Revision: Please state specifically how it is possible for an incredibly strong steel frame building to collapse at free fall speed in approximately six seconds without incurring any resistance.

8. Comment: I was not able to find in the report a clear explanation of how the building collapsed from the bottom when video footage shows the collapse initiating at the top at the penthouse. The video footage clearly shows the upper portion of the structure remain intact as it collapses into its own footprint. How is this possible if the collapse initiation occurred at the penthouse - the top portion should have been crumbling and falling apart as the structure collapsed.

Reason for Comment: It is important for the public to understand how this structure collapsed at the base rather than from the top downward.

Suggestion for Revision: Please state specifically in the report how it is possible that this structure collapsed at the base while the upper structure remained intact during collapse.

9. Comment: I was not able to find in the report a clear explanation as to how WTC Building 7 collapsed straight down in perfect symmetry when, according to the NIST report, column 79 failed on one side of the building. If failure occurs on only one side of the building then the building should have toppled over to the side of failure not straight down. The angular momentum of the massive weight should have pulled the structure over to one side.

Reason for Comment: It is important for the public to understand how failure on one side of a steel frame building can cause global symmetrical collapse of the entire structure.

Suggestion for Revision: Please state specifically in the report why failure of column 79 did not cause this structure to topple over to one side in accordance with angular momentum and instead somehow incurred global collapse.

10. Comment: I was not able to find in the report discussion of the fact that structural steel is ductile not brittle. Ductile steel will not snap in half easily, it will bend but not break in half. Consequently, I did not find a clear explanation of how it is possible for incredibly strong ductile steel to break in half in approximately six seconds while the building collapse at free fall speed.

Reason for Comment: It is important for the public to understand that structural steel is ductile not brittle and will not break in half easily.

Suggestion for Revision: Please state specifically in the report how it is possible for very strong ductile structural steel to break in half in six seconds during the collapse of the structure.

11. Comment: The NIST report claims that open air fire can cause the global progressive collapse of a steel frame building at free fall speed in perfect symmetry. If this is the case then it appears that it will no longer be necessary to hire expensive controlled demolition teams to demolish a steel frame building. Instead, it will only be necessary to light a few small fires, wait a couple of hours, and then watch the incredibly strong steel frame building collapse.

Reason for Comment: It is important for the public to understand that there are now opportunities to start new controlled demolition companies that only use fire to demolish incredibly strong steel frame buildings. This can mean new jobs for a lot of people.

Suggestion for Revision: Please state specifically in the report that controlled demolition can now be accomplished through the use of small open air fires in a steel frame building resulting in perfect symmetrical global progressive collapse of the structure at free fall speed.

12. Comment: I was not able to find in the report any other examples of steel frame buildings experiencing global progressive collapse as a result of open air fire. I am not aware of any other steel frame building collapsing as a result of fire. Likewise, I have never seen or heard of a steel frame cooking grill experiencing global collapse due to the open air fire.

Reason for Comment: The public needs to know if their steel frame cooking grill will experience global progressive collapse as a result of open air fire while cooking their favorite foods. People will be severely disappointed if their grills start to experience global progressive collapse.

Suggestion for Revision: Please state specifically in the report that steel frame cooking grills are now at risk of global progressive collapse due to thermal expansion caused by open air fire. Please explain how it is possible for steel frame cooking grills to collapse due to open air fire even though it has never happened previously. It's important for people to understand the risks while cooking on their grills.

13. Comment: I was not able to find anywhere in the report where the NIST investigators had performed actual physical tests of certified steel, both fire-protected and unprotected, placed under open air fire to verify the extent of thermal expansion that occurs under open air fire conditions. It appears that NIST has solely relied on computer modeling to support its theories.

Reason for Comment: It is important for the public to understand that the NIST report is not supported by actual physical tests of certified steel that has been exposed to open air fire. These tests would have been very easy for NIST to perform to determine the amount of thermal expansion that occurs as a result of exposure to open air fire.

Suggestion for Revision: Please state specifically in the report that the NIST investigators did not perform any actual physical tests of certified steel to determine the amount of thermal expansion when exposed to open air fire. Alternatively, please take the time to perform as many actual physical tests as are needed to accurately determine the amount of thermal expansion of steel when exposed to open air fire. Please include the results of these physical tests in the final report.

14. Comment: I was not able to find anywhere in the report where the NIST investigators had performed actual physical tests of certified steel columns and beams, both fire-protected and unprotected, that have been bolted together in the same manner as an actual building and placed under open air fire to verify that it is possible for a column to buckle as a result of open air fire and then have instantaneous progressive global collapse of the entire structure in perfect symmetry in six seconds or less. It appears that NIST has solely relied on computer modeling to support its theories.

Reason for Comment: It is important for the public to understand that the NIST report is not supported by actual physical tests of certified steel that has been exposed to open air fire. These tests would have been very easy for NIST to perform to determine if it is possible for a steel column to buckle as a result of open air fire and then to have progressive global collapse of the entire structure in perfect symmetry in six seconds or less.

Suggestion for Revision: Please state specifically in the report that the NIST investigators did not perform any actual physical tests of certified steel to determine if it is possible for a steel column to buckle as a result of open air fire and then to have progressive global collapse of the entire structure in perfect symmetry in six seconds or less. Alternatively, please take the time to perform as many actual physical tests as are needed to accurately determine if it is possible for a steel column to buckle as a result of open air fire and then to have progressive global collapse of the entire structure in perfect symmetry in six seconds or less. Please include the results of these actual physical tests in the final report.